

Work Order ID 62048

Wednesday, September 15, 2010 11:17:24 A



Page 1

Item ID: D2580-1

Accept



Setup Start



Revision ID:

Stop



Item Name: 205 Skidtube bent detail

Start Date: 9/15/2010 Start Qty: 2.00



Cust Item ID:

Required Date: 9/22/2010 Req'd Qty: 2.00



Customer:

Reference:

Approvals:

Process Plan:

Handwritten signature

Date:

10-9-15

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2580	Rev D								
100		0.00							
	HandFinish	Memo							
Hand Finishing	1- Inspect mat'l D2500-1-190 for damage.	0.00							
	2- Chemical Conversion Coat as per QSI 005 4.1								
101	QC3- Inspect Part Finish	0.00							
	QC	Memo							
Quality Control		0.00							

(12) 33 10/09/21

(2x) MB 10-09-21

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NOTE: Date & initial all entries

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Run Start

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

110

0.00



Skidtubes

Skidtubes

Memo

0.00

1-Drill pilot holes using drill jig DT 8149 (Do not use cutting fluid)

2-Open holes to 0.500" as per Dwg D2580 without cutting fluid

3-Deburr and blow out all chips from inside of tube

4-Bond web in place per QSI 015.

□□

A/R Sikaflex-291 batch: M115 114 □□□

Sikaflex expire date: 11-1-30

Start time and date: 3:45pm 10-9-22 bond for 12hrs

130



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

8/20/23

(X2)

BB

10/29/21

>

DP

10-9-22

(X2)

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Cust Item ID:

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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

140

Identify as per dwg & Stock Location: 4/6

0.00

DP

10-9-23

②



Packaging

Memo

0.00

Packaging

150

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/09/27
MF
10-9-23

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Picklist Print

Wednesday, September 15, 2010 11:17:28 AM

Page 1

Work Order ID: 62048

Parent Item: D2580-1

Parent Item Name: 205 Skidtube bent detail

Start Date: 9/15/2010

Required Date: 9/22/2010

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP B01.11.08 Revised Step 9, 10, 12, and 13 SM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D2500-1-190

Manufactured

No

Each

96.0000

1

2



Ext'n - 'I' Beam Tube 4"

Location

Loc Qty

Loc Code

LG

96

52319

23

58427

73

(2) BB

10/09/21

D2596

Manufactured

No

110

Each

2.0000

1

2



Web, 205 Skidtube

Location

Loc Qty

Loc Code

LG46

2

61638

2

B62192

(2)

DP 10-9-22

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DART

DESIGN #	DRAWN BY RH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D2580	REV. D SHEET 1 OF 3
DATE 07.02.27		TITLE 205 SKIDTUBE ASSEMBLY	SCALE NTS
A	96.09.16	NEW ISSUE	
B	96.12.02	AS MANUFACTURED	
C	98.08.26	REDRAWN, INCLUDED DEO 9094/9097	
D	07.02.27	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/9183	

RELEASED
07-06-28 #

QTY -041	QTY -045	Part Number	Description
X		D2580-041	SKIDTUBE ASSEMBLY
	X	D2580-045	SKIDTUBE ASSEMBLY
1	1	D2500-1-190	EXTRUSION
1	1	D2576-3	STEP
20	24	D2579	CROSS BOLT SPACER
16	16	D2594-1	PLUG
16	16	D2594-3	O-RING
1	1	D2596	205 WEB
1	1	D2855	AFT CAP
1	1	D3564-5	WEARSHOE
1	1	D3564-9	WEARSHOE
1	1	D3564-11	WEARSHOE
1	1	D3564-13	WEARSHOE
2	2	D3566-1	GASKET
1	1	D3566-5	GASKET
1	1	D3566-13	GASKET
50	50	ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
50	50	AN3C4A	BOLT
2	2	AN3-5A	BOLT
50	50	AN960C10L	WASHER
2	2	AN960JD10L	WASHER

SHOP COPY
RETURN TO
ENGINEERING
CONTROLLED COPY
NO AMENDMENT
WITHOUT NOTICE
WORK ORDER
U204E
R/10-9-15**GENERAL NOTES:**

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) ALL DIMENSIONS ARE IN INCHES
- 3) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 5) USE DART DRILL TEMPLATE TD2577-205 TO LOCATE AND DRILL \varnothing 0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION D-D (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241/-291.
- 6) WELDING TO BE DONE PER DART QSI 004.
- 7) FINISH:
SEE NOTES ON
PAGE 2 FOR D2580-041 AND
PAGE 3 FOR D2580-045
- 8) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES).

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RELEASED
07-06-28

Diagram illustrating the grinding locations for the propeller cross-section. The diagram shows a cross-section of a propeller with the following labeled areas:

- GRIND FLUSH (4 PLACES)
- GRIND FLUSH
- D2576-3 STEP
- LOCATION RIDGE ON UNDERSIDE OF D2576

Diagram illustrating the assembly of a bolted joint. The components and dimensions shown are:

- DRILL PRIOR TO D2855 CAP INSTALLATION (2 PLACES)
- AN3-SA BOLT (1)
- AN960JD10L WASHER (1) (2 PLACES)
- D2855 CAP
- SEAL WITH SIKAFLEX-241/-291
- 0.40

Diagram of a circular assembly with labels:

- D2579 SPACER
- D2596 WEB (REF)
- AL57-1032-130 (REF) (TYP 50 PLACES)

AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR .0508 HOLES ONLY:

1. CHAMFER HOLE .050 X .45
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C-BORE D2579 SPACER TO .0437 X 1.00 DEEP

i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB
POWDER COAT ASSEMBLY GLOSS WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4

37.50
DISTANCE TO AFT END OF D2598 WEB
3
7
1.750
1.750
0.508 (TYP.) (40 PLACES)
REFER TO DETAIL A
8.750
17.375
26.000
34.188
57.313 (REF)
7 EQUAL SPACES
8.188 PITCH
38.0
91.500
190.0
(D2500-1)

WELD AS PER DETAIL 8

BLACK ANTI-SKID TO 0.5 ABOVE LOCATION RIDGE

BLACK ANTI-SKID TOP OF STEP TO 0.5 ABOVE BOTTOM EDGE

0.5

1.5

1.5

D

P

P

P

P

P

P

P

8

1.5

1.5

1.5

REFER TO DETAIL C

D3566-1

D3566-5

D3566-1

D3566-13

D3564-11

D3564-5

D3564-9


D3564-13

AN304A BOLT (1)

AN960C10L WASHER (1)

(50 PLACES)

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 DART AEROSPACE LTD. HARRISBURG, ONTARIO, CANADA	
DRAWING NO.	REV. 0
D2580	SHEET 2 OF 3
TITLE	SCALE
205 SKIDTUBE ASSEMBLY	1:24

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RELEASED
07-06-28

Diagram illustrating the grinding locations for the D2576-3 step. The diagram shows a cross-section of a component with a central cavity. The grinding locations are indicated by arrows and labels:

- GRIND FLUSH (4 PLACES)
- GRIND FLUSH
- D2576-3 STEP
- LOCATION RIDGE ON UNDERSIDE OF D2576
- GRIND FLUSH

Ø0.208

DRILL PRIOR TO D2855 CAP
INSTALLATION (2 PLACES)

SEAL WITH
SIKAFLEX-241/-291

AN3-SA BOLT (1)
AN960JD10L WASHER (1)
(2 PLACES)

D2855 CAP

SEE NOTE ii)

0.40

5

D2579 SPACER

D2596 WEB (REF)

ALS7-1032-130 (REF)
(TYP. 50 PLACES)

AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:

1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP

i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB
POWDER COAT ENTIRE ASSEMBLY GREEN (REF. 4.3.5.8) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4

ii) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE
WITH THE SPACER AT THIS LOCATION

[illegible]

(MAKE FROM D2580-1 DRILLING DETAIL)

5.985
1.4
4
51.340
5.338 (REF)
39.580
5.915
3.630 (REF)
Ø0.508 (8 PLACES)
20.0
Ø0.640
11
1.0
DISTANCE BETWEEN HOLE AND TANGENT POINT
1.0
DISTANCE BETWEEN HOLE AND TANGENT POINT
32.0 ± 1.0

AFT HULL SECTION

WELD AS PER DETAIL F

BLACK ANTI-SKID TO 0.5 ABOVE LOCATION RIDGE

BLACK ANTI-SKID TOP OF STEP TO 0.5 ABOVE BOTTOM EDGE

NO C'BORE NO PLUG

NO C'BORE NO PLUG

NO C'BORE NO PLUG

D3566-1

D3566-5

D3566-1

D3566-13

D3564-11

D3564-5

D3564-9

D3564-13

AN3C4A BOLT (1)

AN960C10L WASHER (1)

(50 PLACES)

DESIGN	DRAWN BY	
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CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. 02580	REV. 0 SHEET 3 OF 3
DATE 07.02.27		TITLE 205 SKIDTUBE ASSEMBLY 1:24	

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